

## REMARKS

Claims 1-7 are pending. Claim 1 is amended, claim 3 is withdrawn and new claims 4-7 are added. The amendment to claim 1 and new claims 4-7 are supported by the specification and the originally filed claims. In particular, the amendment of claim 1 is supported by paragraphs 4 and 5 of the specification. Further, new claims 4-5 and 7 are supported by claims 1-2 and new claim 6 is supported by paragraph 17 on page 6 of the specification. No new matter is added. Applicants respectfully request reconsideration and withdrawal of all of the rejections.

Applicants thank the Examiner for the courtesies extended during an October 27, 2004 personal interview with Applicants' undersigned representative, during which the pending claims and the references cited in the August 10, 2004 Office Action were discussed. The remainder of Applicants' separate summary of the substance of the personal interview is contained in the remarks herein.

Applicants thank the Examiner for agreeing that withdrawn claim 3 will be rejoined upon the allowance of claim 1 (Office Action, page 2, paragraph 1). Further, Applicants thank the Examiner for forwarding translations of JP 60-159145 and JP 60-159147.

Claims 1-2 were rejected under 35 U.S.C. § 102(b) as being anticipated by at least one of two references to Kazuo et al., Japanese Patent Application Publication No. JP 60-159145 (hereinafter "Kazuo I") and Japanese Patent Application Publication No. JP 60-159147 (hereinafter "Kazuo II"). The rejection is traversed.

Applicants respectfully submit that that Kazuo I and II do not teach or suggest the aluminum alloy of superior strength of the presently claimed invention. Kazuo I and II do not teach that the "aluminum alloy has a welding joint efficiency not less than 1.0 in a rapidly cooled welding method" as required by present claim 1.

In contrast, Kazuo I and II require etching of an alloy plate to "form a fine

striped pattern similar to straight grain of wood on the surface of the plate" to obtain an "improved decorative effect and superior strength" (Kazuo II, Abstract). In fact, the entire "PURPOSE" of Kazuo I and II is "**[T]o form a fine striped pattern similar to straight grain of wood by etching an Al alloy plate contg. a specified amount of V, Cr or B and specified amounts of Mg and Mn as essential components or further contg. Cu and by carrying out chemical polishing or electropolishing as required**" (Kazuo I and II, Abstracts) (emphasis added).

Further, as noted by Applicants' representative during the personal interview of October 27, 2004, Example 4 of Kazuo II seems to teach an aluminum alloy with 0.8% Mg, 0.6% Mn, 2.0% V and 0.1% Cu (Kazuo II, page 4, left column, first paragraph). As such, the composition of Example 4 of Kazuo II requires 2.0% V. However, the specification of the present application specifically notes that "[w]hen the V content is more than 1.0 wt % ..., coarse crystallized material is formed in a parent material, whereby workability of the parent material is extremely decreased" (Specification, paragraph 18). As such, Applicants submit that claim 2, in particular, is not anticipated Kazuo II.

In view of the above comments, Applicants respectfully submit that the disclosures of Kazuo I and II do not anticipate claims 1 and 2. Thus, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1 and 2 under 35 U.S.C. § 102(b) in view of Kazuo I and II.

Claims 1-2 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hidenori et al. (Japanese Patent Application Publication No. JP 10-237577). The rejection is traversed.

Hidenori et al. teaches an "alloy material for welding, improved in the strength of a base material and a welded joint, ... by providing a composition consisting of **Mg, Sc, Ti, B** at least one element among Mn, Cr, V, Ni, and Mo, and the balance Al

with inevitable impurities" (Hidenori et al., Abstract) (emphasis added). More specifically, Hidenori et al. discloses that the alloy material consists of, "by weight ratio, 4.0-7.0% Mg, 0.01 –0.3% Sc, 0.005-0.2% Ti, 0.0001-0.08% B, at least one kind among 0.01-1.5% Mn, 0.01-0.6% Cr, 0.01-0.5% V, 0.05-3.0% Ni, and 0.01-0.5% Mo, and the balance Al with inevitable impurities. It is preferable that at least one kind among 0.3-1.0% Ag, 0.05-0.1% Cu, and 0.01-0.25% Zn is further added" (Abstract) (emphasis added). Further, Example 5 of Hidenori et al. comprises, by weight ratio, 6.0% Mg, 0.30% Sc, 0.09% Ti, 0.0001% B, 1.5% Mn, 3.0% Ni, 0.01% Cr and 0.06% Cu.

Applicants submit that Hidenori et al. does not teach or suggest the aluminum alloy of the presently claimed invention. Neither the composition, nor the welding joint efficiency of present claim 1 are taught or suggested by the disclosure of Hidenori et al. The compositions disclosed by the Abstract and Example 5 of Hidenori et al. require 0.005-0.2 %Ti, 0.0001-0.08% B, and 0.01–0.3 % Sc. In contrast, Sc is not required by the presently claimed invention.

Applicants note that the specification of the present invention specifically distinguishes the disclosure of Hidenori et al. from the presently claimed invention. The specification notes that "a technique in which Sc is added to increase the strength as shown in Japanese Patent Unexamined (KOKAI) Publication No. 10-237577 [Hidenori et al.], has been considered. However, when strength is increased by adding Sc, the production cost is high because Sc is expensive" (Specification, paragraphs 4-5). Further, the "consisting essentially of" language in present claim 1, as suggested by the Examiner, emphasizes that Sc should not be present or should only be present, if at all, as an impurity.

The Examiner has also noted that Example 11 of Hidenori et al. comprises, by weight ratio, 4.5% Mg, 0.12% Ti, 0.85% Mn, 0.20% Cr and 0.08% Cu. Applicants

submit that Example 11 is a comparative example demonstrating the decreased strength of a composition without the addition of the required Sc. In fact, the alloy of Example No. 11 is not part of the claimed invention of Hidenori et al., but rather a conventional alloy entitled JIS-A5083. Further, the amount of Cr in Example No. 11 is 0.20%.

In contrast, the present application requires that if Cr is present, that it be within the range of 0.35 to 2.0% (see claim 1). The specification of the present application specifically notes that "when the content of Cr is less than 0.35 wt %, strengthening by the supersaturated solid solution obtained by rapidly cooling cannot be sufficiently realized" (Specification, paragraph 15). As such, Applicants submit that Example 5, in particular, does not anticipate the aluminum alloy of claims 1 and 2.

Thus, Applicants respectfully submit that the disclosure of Hidenori et al. does not anticipate claims 1 and 2. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1 and 2 under 35 U.S.C. § 102(b) as anticipated by Hidenori et al.

Applicants submit that new claims 4-7 should be patentable for at least the above reasons. In particular, new claims 4-7 require the alloy to contain 0.7 to 1.5% Fe by weight. Further, new claim 7 also requires Mn and Cr to be present in 0.8 to 2.5% and 0.35 to 2.0% by weight, respectively. Applicants respectfully submit that none of the above cited references teach or suggest such limitations of the presently claimed invention.

Applicants respectfully submit that this application is in condition for allowance and request favorable action thereon.

In the event that this paper is not considered timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300 referencing Docket No. 108421-00079.

Respectfully submitted,



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